

Sun Woo Kim

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Research Interests

- Physics & kinematics based character & robot animation
- Deep reinforcement learning for character and robot motion control
- Sim-to-real transfer for robot motion
- Text-to-motion retrieval and generation
- Body gesture generation for conversational agents

Education

Simon Fraser University British Columbia, Canada
Ph.D. Student in Computing Science Sep 2025 – Present
Supervisor: Xue Bin (Jason) Peng

Seoul National University Seoul, Korea
Master's degree in Computer Science Sep 2019 – Sep 2022
Supervisor: Jehee Lee
Thesis: *Developing Motion Control of Different Morphology using Deep Reinforcement Learning*

Pohang University of Science and Technology (POSTECH) Pohang, Korea
Bachelor's degree in Creative IT Engineering Feb 2015 – Feb 2019
Magna cum laude GPA: 3.88 / 4.3

Work Experience

NC AI (Spun offed from NCSOFT) Sunnam, Korea
Graphics AI Researcher, Motion Service Lab Feb 2025 – Sep 2025
Research Topic: Text to motion retrieval & generation

NCSOFT Sunnam, Korea
Graphics AI Researcher, Graphics AI Lab Aug 2022 – Feb 2025
Research Topic: Gesture generation & Video to Motion

Publications

Conferences

Body Gesture Generation for Multimodal Conversational Agents

Sunwoo Kim, Minwook Chang, Yoonhee Kim, Jehee Lee
SIGGRAPH Asia, 2024.

Towards Natural Prosthetic Hand Gestures: A Common-Rig and Diffusion Inpainting Pipeline

Seungyup Ka, Taemoon Jeong, **Sunwoo Kim**, Sankalp Yamsani, Joohyung Kim, Sungjoon Choi
IEEE Engineering in Medicine and Biology Society (EMBC), 2024.

Human Motion Control of Quadrupedal Robots using Deep Reinforcement Learning

Sunwoo Kim, Maksim Sorokin, Jehee Lee, Sehoon Ha

Robotics: Science and Systems (RSS), 2022.

Journals

Controllable Single Motion Synthesis

Taehyun Byun, **Sunwoo Kim**, Minwook Chang, Sungjoon Choi

Pattern Recognition(Under Revision)

Workshops

HumanConQuad: Human Motion Control of Quadrupedal Robots using Deep Reinforcement Learning

Sunwoo Kim, Maksim Sorokin, Jehee Lee, Sehoon Ha

Emerging Technologies, SIGGRAPH Asia, 2022.

Awards & Scholarships	Special Grad Entrance Scholarship (CS Department, SFU)	2025
	Runner-up: KCGS Master's Award (Korea Computer Graphics Society)	2022
	Grand Prize: Creative ICT Forum (Ministry of Science and ICT, Korea)	2018
	Grand prize: Creative Design III (POSTECH)	2017
	Grand prize: Creative Design II (POSTECH)	2016

Teaching Experience	Teaching assistant , Seoul National University	Spring 2021
	Core Computing: Computation thinking (Prof. Jehee Lee)	
	Undergraduate tutor , POSTECH	Spring 2018
	Intro to Digital System & Microprocessor Design (Prof. Jaejoon Kim)	

Professional Service	Paper Reviewer SIGGRAPH, SIGGRAPH Asia, TVCG
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Other Experience	Booth Staff , NC AI exhibition booth at SIGGRAPH Presenting motion retrieval & generation research.	2025
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References	Prof. Xue Bin (Jason) Peng Assistant Professor, Simon Fraser University Research Scientist, NVIDIA xbpeng@sfu.ca Prof. Jehee Lee Professor, Seoul National University jeheel@snu.ac.kr Prof. Sehoon Ha Assistant Professor, Georgia Institute of Technology sehoonha@gatech.edu
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